

## Meeting Minutes for 10-27-2020

For the PCB fabrication, we should talk to Michael at [mmcmenary@uidaho.edu](mailto:mmcmenary@uidaho.edu).

The rat and human boards may be placed on the same board and then cut apart since it would be cheaper to be purchased in that manner.

Last year's team had difficulties with noise in their first prototype, but this was fixed in the second one.

Kate said she would like to rerun the Bode plot just to be safe.

Dr. Kumar informed us that the most common noise is "pink noise" which is noise that varies inversely with the frequency. His grad student Joe has a pink noise simulation that we can use to test the device.

Kate discussed the possibility of a bandpass butterworth filter design. Dr. Kumar and Dr. Li reminded us to keep in mind the fact that we do have a budget to keep to as well, and that while this may make the machine more accurate, it may also drive up the price. Kate also mentioned that this might be a possibility for the rat edition, since it needs a higher accuracy.

Dr. Kumar said he would look into the publicly available data for brain waves.

An idea that Dr. Kumar suggested for our presentation might be to include a cost vs quality graph.

We will need to contact last year's team to find out where they got their Arduino code.

The rat electrodes would probably be best placed similar to humans.

We will be moving forward with one wiki page. The project name will be along the lines of "low cost EEG devices for human and rats". The title should be different than the previous 2 years team's though.

For the CS students, they should look into learning the machine learning on their own time, or possibly take the class that's offered here at the university. Dr. Kumar said he would share the book he was using to learn machine learning, which is free.